

Problem 2.64 Use CD Module 2.7 to design a quarter-wavelength transformer to match a load with $Z_L = (100 - j200) \Omega$ to a $50\text{-}\Omega$ line.

Solution: Figure P2.64(a) displays the first solution of Module 2.7 where a $\lambda/4$ section of $Z_{02} = 15.5015 \Omega$ is inserted at distance $d_1 = 0.21829\lambda$ from the load.

Figure P2.64(b) displays a summary of the two possible solutions for matching the load to the feedline with a $\lambda/4$ transformer.

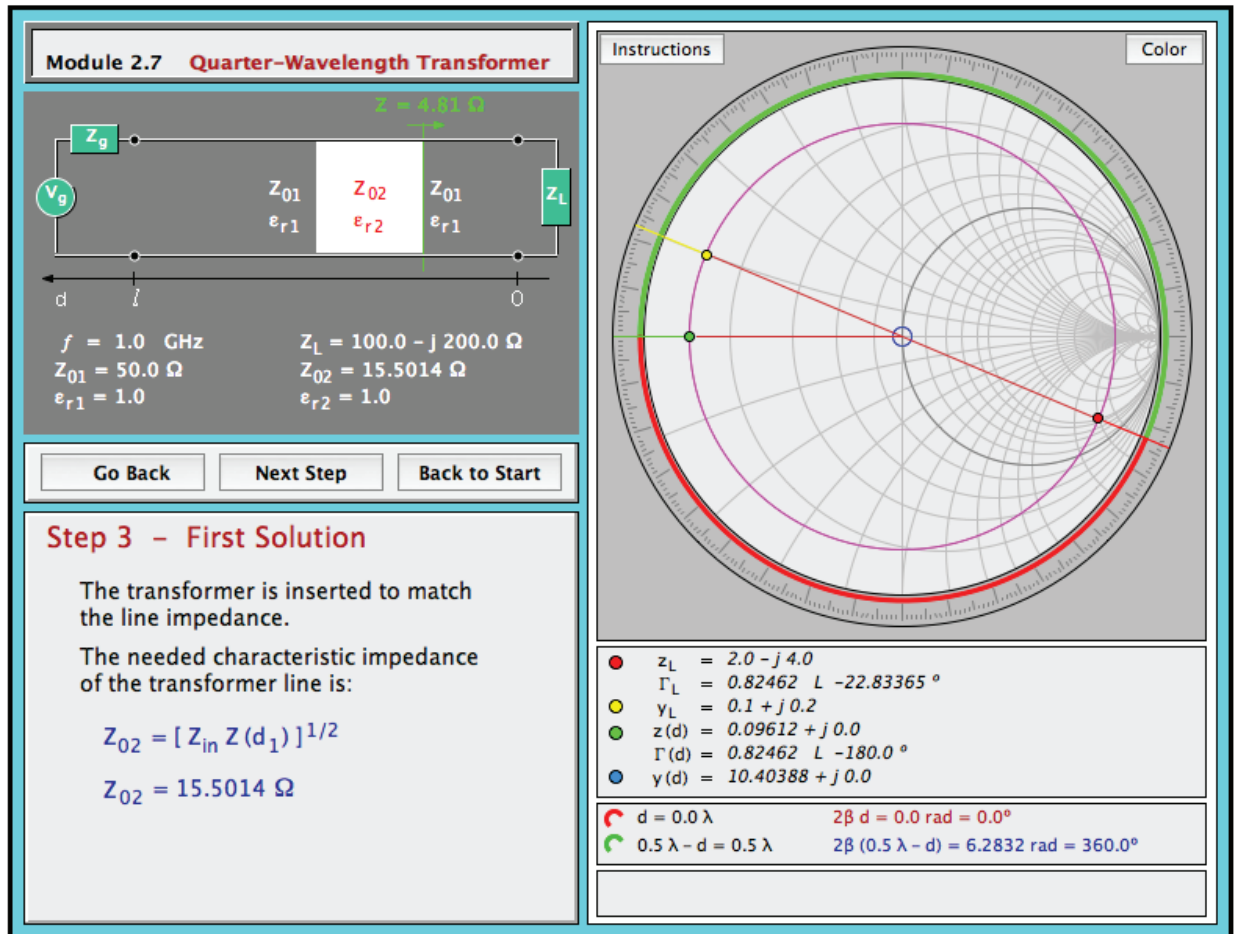


Figure P2.64(a)

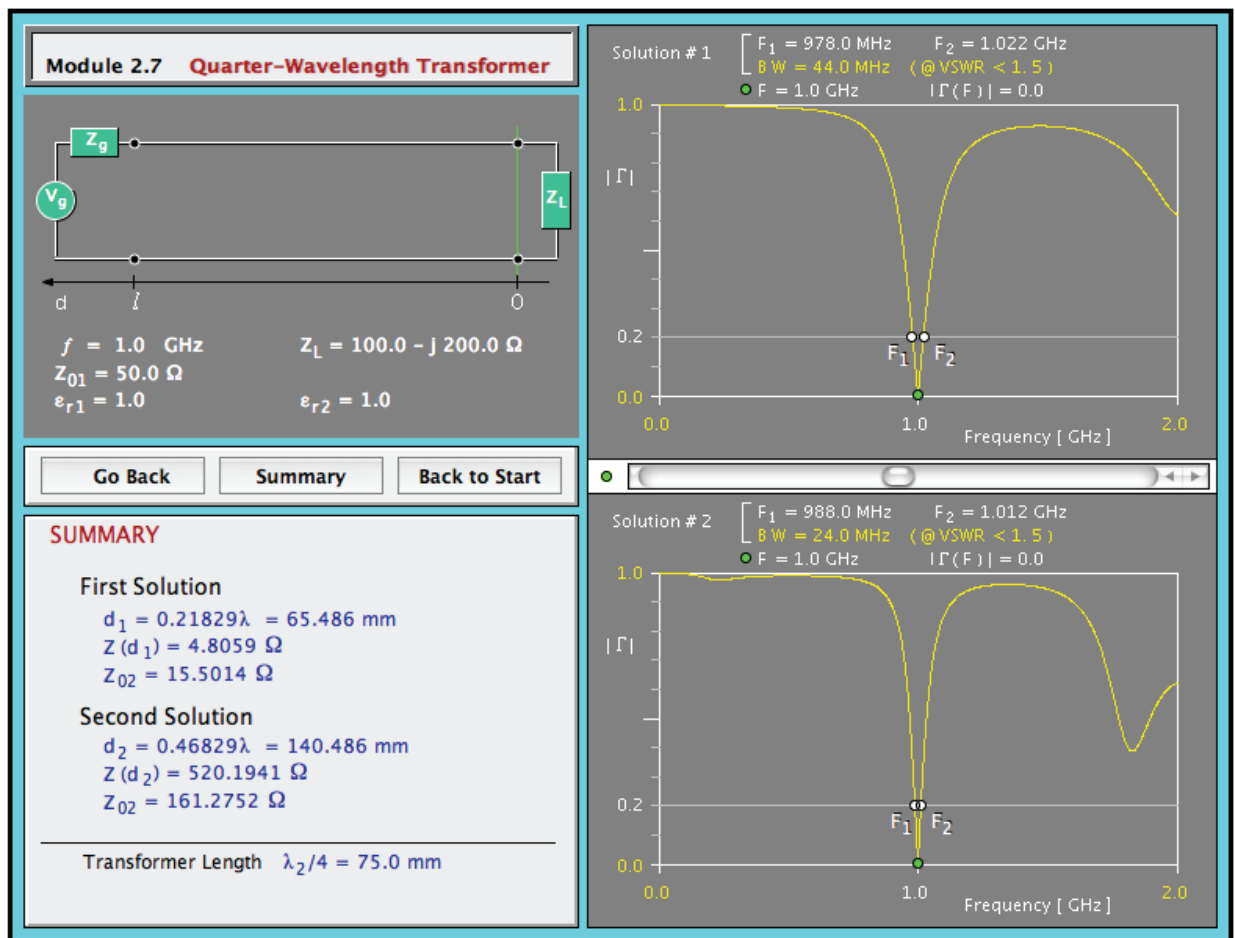


Figure P2.64(b)